



Safety Topic of the Month

Back Safety

7/1/08



How does your back feel?

According to the Bureau of Labor Statistics, more than one million workers suffer back injuries each year, and back injuries account for **one** of every **five** workplace injuries or illnesses.

This Safety Topic of the Month covers:

- Back anatomy and common injuries
- Safe lifting techniques
- Contributing factors to back injuries and ways to promote back health!



See the Hazard - Strains and Sprains are hard to heal!



Back injuries are exceedingly painful. They are difficult to heal, and they have an effect upon everything a person does. If you have ever experienced a back injury, you already know this.

What you may not know is that after you have experienced one back injury, you are much more likely to experience another one sometime during your lifetime. **It is important to learn techniques and procedures that may help you prevent a reoccurrence.**



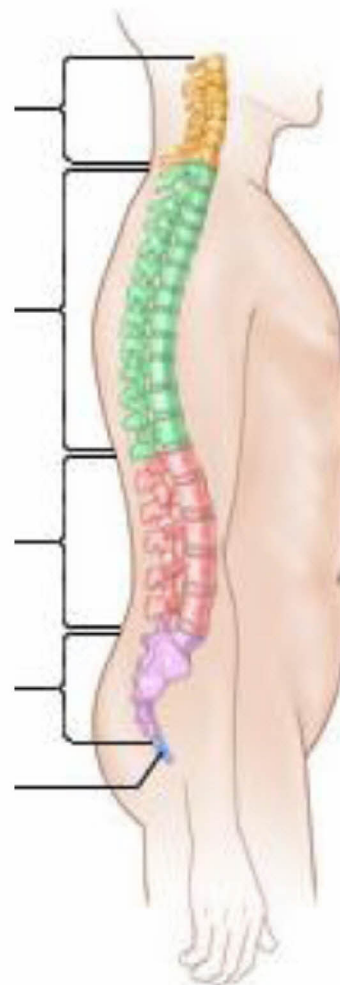
Anatomy of your Spine!

The spine consist of 26 bones and soft discs to cushion between them.

A healthy back is a dynamic functional unit that relies on all of it's parts to support, mobilize, protect, and innervate The rest of your body!

Question:

Which part of your back is the weakest and why?



© Heat

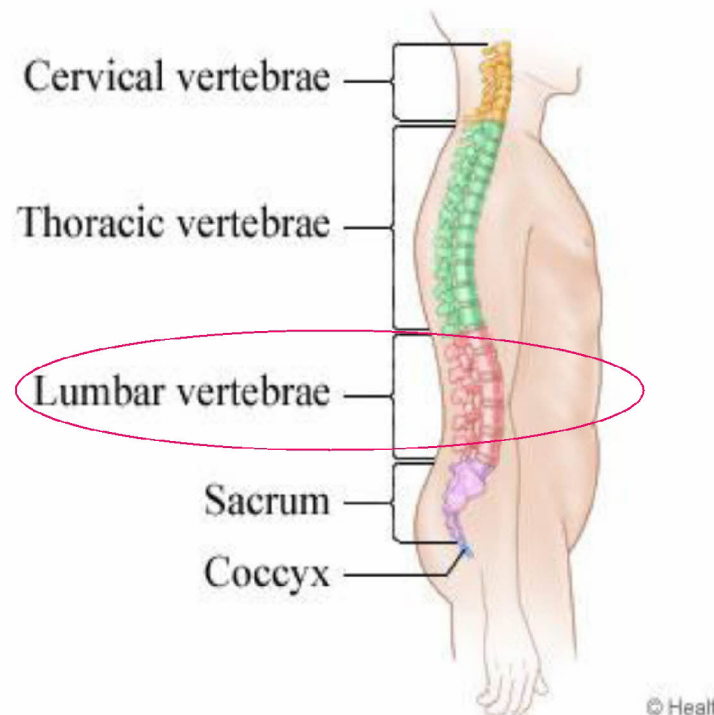
Damage can accumulate over time

Your lower back (lumbar spine) is the most susceptible to injury.

It supports the greatest amount of weight from the upper body as well as torsion forces from below.

“Micro damage” caused by awkward postures, twisting and lifting, or sudden changes in speed, accumulates over time.

Without warning, micro-damage can become a full tear or rupture.



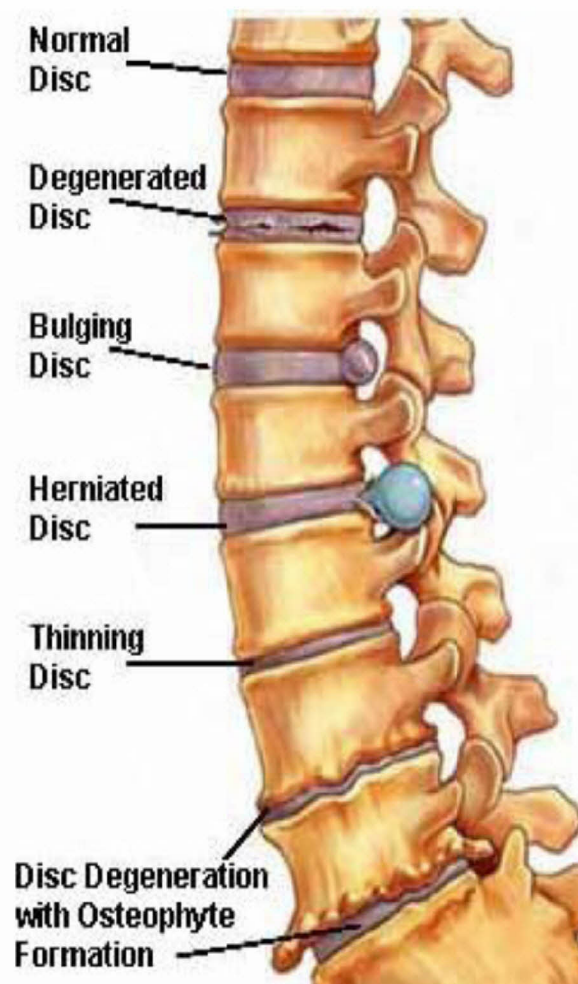
© Healt

Damage can accumulate over time

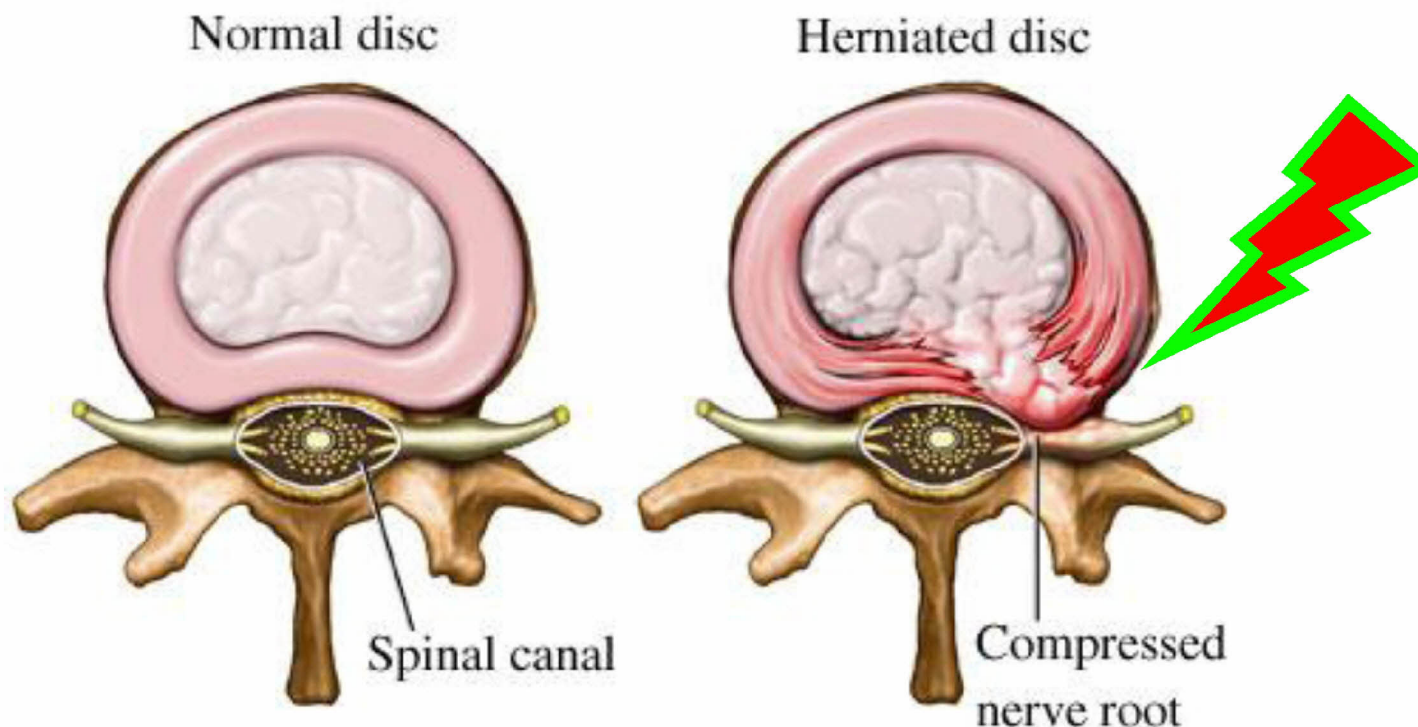
Many of the problems that cause back pain are the result of injury and degeneration of the intervertebral disc.

Eventually, discs can collapse or herniate; vertebrae can shift; bone spurs can develop.

This progression of disc degeneration can be seen in the picture!



This is a cross section of a normal and a herniated disc



When the discs are damaged from an injury, normal wear and tear, or disease, they may bulge abnormally or break open. This is called a herniated or slipped disc. If the herniated disc presses on a nerve root, it may cause pain, numbness, or tingling.



Contributing Factors to Back Injury

Poor Physical Conditioning - If you have weak stomach muscles, your back does not get all the support it needs to safely lift or carry heavy objects.

Poor Posture - It is best to try to maintain the back in its neutral - "S" shaped curve. Neutral spine means your ears are aligned over your shoulders, which are over your hips, and over your ankles...

Extra Weight - The more you weigh – or carry - the more stress it puts on your back every time you bend over... on a **10:1 ratio**

Stress - Tense muscles are more susceptible to strains and spasms.

Overdoing it - Don't be afraid to say, "This is too heavy for me to lift alone." Many people have injured their backs because they were afraid to ask for help.



How to Avoid Injuries

Be fit

Even if you move around a lot on your job or your job requires physical exertion, **you still need to exercise.**

First of all, you'll keep your weight in check, and carrying around a healthy weight for your body's frame minimizes stress on your back.

You can do specific strengthening and stretching exercises that target your back muscles. Strong and flexible muscles will help keep your back in shape.

How to Avoid Injuries: Develop a "HARD CORE"

These exercises work the deep muscles of your Abdomen...



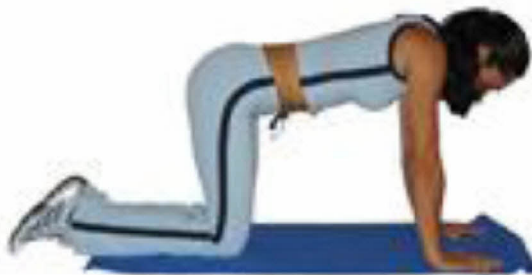
Prone Iso-Abs



Floor Bridge



Alternating Opposite Arm-Leg Raise



How to Avoid Injuries: Use proper lifting techniques



1. Warm up your muscles
2. Think through the lift & plan your steps
3. Establish Neutral Spine
4. Bend your well conditioned knees and hips to the object level
5. Lift the object safely with a good grip
6. Maintain neutral spine while you lift, carry, or move the object.
7. Get mechanical assistance if you need it ... before trying to lift an object.



How to Avoid Injuries: Poor lifting can cause micro-damage!



When you add in the 105 pounds of the average human upper torso, you see that lifting a ten pound object actually puts 1,150 pounds of pressure on the lower back.

105 lb upper body

10 lb object

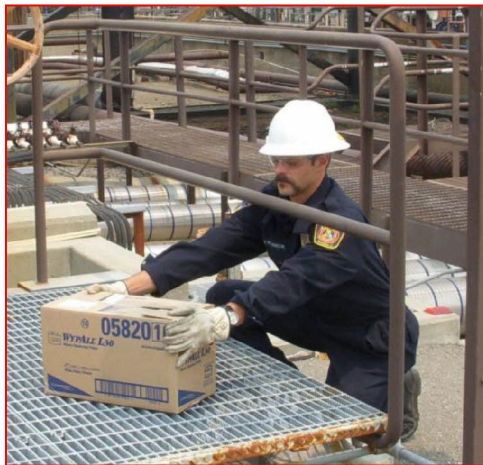
1150 lb force



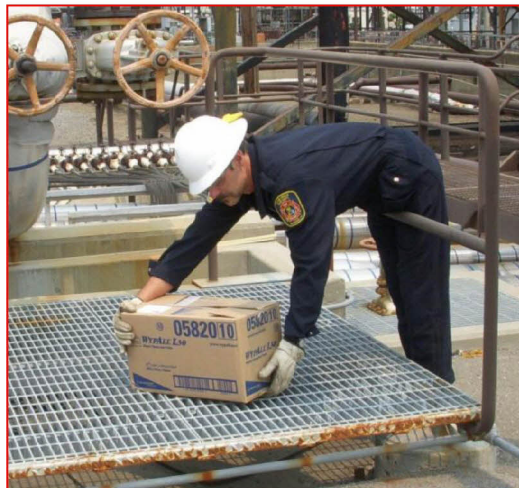
How to Avoid Injuries: Avoid Awkward Postures



Awkward Postures include any non-neutral trunk postures related to bending and twisting in extreme positions or at extreme angles. Awkward postures also include kneeling, squatting, and stooping.



Around
Obstacles



Extreme Angles &
Stooping



Rounded back

How to Avoid Injuries: Ergonomics and Healthy Habits



Inspect your office or work area. Modify your work to reduce repetitive job tasks and awkward postures. Remember that you're trying to decrease total force and repetition and promote neutral postures.

For example, you might use lifting devices or adjustable equipment to help you lift loads or interrupt repetitive work tasks.

If you work at a computer, make sure that your monitor and chair are positioned properly – to encourage neutral spine.

Please adhere to your Work Pace breaks.

***** Call 2-ERGO for an ergo evaluation *****



How to Avoid Injuries: Reduce Stress

Being under stress causes your muscles to tense, and this can make you more prone to injury. Also, the more stress you feel, the lower your tolerance for pain.

Try to minimize your sources of stress both on the job and at home.

Develop coping mechanisms for times when you feel especially stressed.

Try to perform deep-breathing exercises, take a walk around the block or talk about your frustrations with a trusted friend.

Additional Resources – click to follow links



[Richmond Fitness Center](#)

- HEART PROGRAM – Personal Training, Relaxation Training, Nutritional Consultation,
- Smoking Cessation
- Richmond PT
- Yoga – Monday 5pm in the cafeteria (Free!)
- Fit Breaks

[Warm Up and Stretch Routine](#)

[Ergonomics/ RSIP](#)

[Safety Boot Schedule](#)